



دانشگاه فردوسی مشهد

قطب علمی ریاضیات نرم و پردازش بوشمند اطلاعات

Center of Excellence on Soft Computing and Intelligent Information Processing

A Report on
**Soft Computing related
scientific societies, research
centers, and centers of
excellence**

Version 1.0: 5/18/2015

Presented by: H. Adineh, Y. Abroshan.

Faculty Advisor: M. Akbarzadeh

Research Objective and Methodology

In this research we concentrate on finding and listing soft computing related scientific societies, research centers, and centers of excellence in the world with International activities. When an academic researcher works on a scientific research area, it is important to know about other works and other societies for co-operating and interacting with them in the world class grade especially in Soft computing.

Separately, we search the Internet for finding them in addition to tracking related web sites on each center. We limit collected information to one page only for each center by providing only the more salient information, such as their website, contact information and location, focus areas, main faculty, etc. Finally, the result is presented in this report.

Outline

The Berkeley Initiative in Soft Computing (BISC)
Center of Excellence on Soft Computing and Intelligent Information Processing (SCIIP)
European Centre for Soft Computing
Soft Computing Research Group
Research Group "Soft Computing and Intelligent Information Systems"
Neural Network Research Group
Soft Computing, Intelligent Systems and Modeling Research Group (SCISM)
GI Group Fuzzy Systems and Soft Computing
The European Society for Fuzzy Logic and Technology (EUSFLAT)
German Research Center for Artificial Intelligence (DFKI)
Software Competence Center of Hagenberg (SCCH)
The Artificial Intelligence Research Institute (IIIA)
Machine Intelligence Research Institute (MIRI)
European Neural Network Society (ENNS)
The North American Fuzzy Information Processing Society
Center for Soft Computing Research: A National Facility
IEEE SMCS Technical Committee on Soft Computing
The International Fuzzy Systems Association.
Institute for Advanced Management Systems Research (IAMSR)
Institute for Research and Applications of Fuzzy Modeling (IRAFM)
Institute for Applied Computer Science (IAI)
Institute of Applied Informatics and Formal Description Methods (AIFB)
Approximate Reasoning and Artificial Intelligence (ARAI)
SCIP (Soft Computing in Image Processing) Working Group

The Berkeley Initiative in Soft Computing (BISC)

The basic ideas underlying soft computing in current incarnation have links to many earlier influences, among them Prof. Zadeh's 1965 paper on fuzzy sets; the 1973 paper on the analysis of complex systems and decision processes; and the 1979 report (1981 paper) on possibility theory and soft data analysis.



Focus Areas:

BISC Program is the world-leading center for basic and applied research in soft computing. The principal constituents of soft computing (SC) are fuzzy logic (FL), neural network theory (NN) and probabilistic reasoning (PR), with the latter subsuming belief networks, evolutionary computing including DNA computing, chaos theory and parts of learning theory. Some of the most striking achievements of BISC Program are: fuzzy reasoning (set and logic), new soft computing algorithms making intelligent, semi-supervised use of large quantities of complex data, uncertainty analysis, perception-based decision analysis and decision support systems for risk analysis and management, computing with words, computational theory of perception (CTP), and precisiated natural language (PNL).

Main Faculty:

- Professor Lotfi A. Zadeh
 - Email: zadeh@eecs.berkeley.edu
 - URL: <http://www.cs.berkeley.edu/~zadeh/>

Contact:

729 Soda Hall, MC #1776 Computer Science Division Department of Electrical Engineering and Computer Sciences University of California Berkeley, CA 94720-1776	Phone: +1 510 642 4959 Fax: +1 510 642 1712 URL: http://www.cs.berkeley.edu/~zadeh/
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Center of Excellence on Soft Computing and Intelligent Information Processing (SCIIP)

The Main Goal of Center of Excellence on Soft Computing and Intelligent Information Processing at Ferdowsi University of Mashhad, which is the largest university in eastern of Iran and one of the top universities in the country, is to deal with the common aspects and synergic combination of Soft Computing and Intelligent Information Processing. They wish to play a significant role in the development of these research areas, improvement of the national industries, and training of experts.



Goals:

- National Scientific Authority in Soft Computing and Intelligent Information Processing
- Worldwide Theory and Knowledge Development
- Special focus on the optimization of industrial processes for efficiency improvement according to the provincial and national requirements.
- Development of Required Infrastructures for Knowledge-based Entrepreneurship
- Communication and Collaboration with Other National and International Universities and Research Centers
- Introducing Soft Computing and Intelligent Information Processing to the Society and the Industrial/Academic Experts

Main Technical Subjects:

- Modeling and Analysis of Complex Systems
 - Supervisor: Dr. M.R. Akbarzadeh Tootoonchi
- Soft Computing and Intelligent Optimization Algorithms
 - Supervisor: Dr. H. Rajabi Mashhadi
- Pattern Recognition and Machine Learning
 - Supervisor: Dr. H. Sadooghi Yazdi

Main Faculty:

- Professor Dr. Mohammad Reza Akbarzadeh Tootoonchi
 - Email: akbarzadeh@kiaeee.org
 - URL: <http://akbazar.profcms.um.ac.ir/>

Contact:

Center of Excellence on Soft Computing and Intelligent Information Processing (SCIIP) Ferdowsi University Of Mashhad Mashhad, Iran	Phone: +98 513 880 6027 URL: http://sciip.um.ac.ir/index.php/aboutsciip/sc ope
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European Centre for Soft Computing

The European Centre for Soft Computing is a research and development centre promoted by the Foundation for the Advancement of Soft Computing located in Mieres, Asturias (Spain). Their main objectives are to carry out basic and applied research in the field of Soft Computing as well as to transfer technology to industrial applications of intelligent systems to solve real-world problems. The activities and programs of the ECSC are guided by an international Scientific Committee. Besides, the Centre has become a meeting point for worldwide experts and young researchers where they can develop advanced research and training activities.



Research and people:

- **Fuzzy-evolutionary applications**

Principal Researcher

- Dr. Sergio Damas (sergio.damas@softcomputing.es)

- **Intelligent data analysis**

Principal Researcher:

- Dr. Christian Borgelt (christian.borgelt@softcomputing.es)

- **Computing with perceptions**

Principal Researcher

- Gracián Triviño (gracian.trivino@softcomputing.es)

- **Fundamentals of Soft Computing**

Emeritus researchers

- Dr. Claudio Moraga (claudio.moraga@softcomputing.es)
- Dr. Enric Trillas (enric.trillas@softcomputing.es)

Contact:

European Centre for Soft Computing Edificio de Investigación. Calle Gonzalo Gutiérrez Quirós S/N 33600 Mieres, Asturias.:	Phone: +34 985456545 URL: http://www.softcomputing.es/metaspac/e/portal/3/108 facebook:: https://www.facebook.com/ECSoftComputing
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Soft Computing Research Group

The SOCO Group is active in the area of research on Soft Computing Systems since 1997. It is formed by several researchers of the (Department of Computer Science) at the (Universitat Politècnica de Catalunya BarcelonaTech).



Focus Areas:

- Supervised Neural Networks
- Unsupervised Neural Networks
- Fuzzy Systems
- Genetic Algorithms and Evolutive Strategies
- Support Vector Machines
- Feature Selection and Extraction
- Pattern Recognition and Computer Vision
- Data and Knowledge Visualization

Applications:

- Biomedical Applications
- Industrial and Environmental Applications
- Business Applications
- Social Sciences Applications

Main Faculty:

- Àngela Nebot
 - Email : angela@lsi.upc.edu
 - URL: <http://www.lsi.upc.edu/~angela>
- Associate Professors
 - Àngela Nebot
 - René Alquézar
 - Lluís Belanche
 - Enrique Romero
 - Alfredo Vellido
 - Francisco Mugica

Contact:

Soft Computing Research Group	URL: http://www.cs.upc.edu/~websoco/index.php
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Research Group "Soft Computing and Intelligent Information Systems"

The "**Soft Computing and Intelligent Information Systems**" research group was created in 2001. More than 30 researchers between senior researchers and Ph.D. students constitute the research group, They are organized in seven laboratories, directed by senior researchers and according to the seven tracks that identify research work of the group. The members of the group are associated to one or more laboratories according to their areas of research.



Focus Areas:

The group is focused on the development of soft computing techniques: *fuzzy systems, genetic algorithms, memetic algorithms, genetic fuzzy systems, evolutionary learning, ant colony optimization and other metaheuristics*, as well as their application in fields such as: *data mining, decision making, image registration, information retrieval and web-access systems, bioinformatics, distributed computational intelligence, time series* and so on.

laboratories:

- Evolutionary and Fuzzy Data Mining and Intelligent Systems
- Bioinformatics. Mining, Modeling, Annotating, Predicting
- Decision Making
- SOft Computing applications for Complex EnviRonments
- Genetic Algorithms and Biologically Inspired Computation
- SECABA (Quality Evaluation and Information Retrieval)
- Distributed Computational Intelligence and Time Series

Main Faculty:

- Dr. Francisco Herrera
 - Email : herrera@decsai.ugr.es
 - URL: <http://decsai.ugr.es/~herrera>
- Number of Other members :
 - Ph. Doctor = 39
 - Ph. D. Students = 19
 - Collaborators = 10

Contact:

Department Computer Science and Artificial Intelligence University of Granada, E-18071 Granada, Spain	Phone: +34-958-240598 Fax: +34-958-243317 URL: http://sci2s.ugr.es/presentation/index.php
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Neural Network Research Group

Focus Areas:

- Neural networks, evolutionary computation, fuzzy logic, and chaos
- Data mining
- Bioinformatics, biomedical information technology



Main Faculty:

- **Assoc Prof Wang, Lipo (Group Leader)** - Soft computing (neural networks, evolutionary computation, fuzzy logic, and chaos) with applications to data mining, bioinformatics, multimedia, optimization, and communications.
 - Email: elpwang [at] ntu [dot] edu [dot] sg
 - URL: <http://www.ntu.edu.sg/home/elpwang>
- Assoc Prof Chan, Chee Keong - Artificial intelligence and software engineering, with keen interest in genetic algorithms and data mining
- Assoc Prof Chen, Lihui - Theory and application of neural computing including learning algorithms, grammatical inference, content-based image indexing & retrieval and intelligent agents
- Asst Prof Olga Sourina - Visual data mining
- Assoc Prof Tan, Boon Tiong - Soft computing
- Asst Prof Wan, Chunru - Signal processing, neural networks, parallel computing, computational mathematics
- Asst Prof Yap, Kim Hui - Computational intelligence, multimedia computing, multiuser detection, blind signal and image processing

Contact:

School of Electrical and Electronic Engineering Nanyang Technological University Block S1, Nanyang Avenue, Singapore 639798	Phone: +65 6790 6372 Fax: +91 33 2578 8699 URL: http://www.ntu.edu.sg/home/elpwang/softcomp.html
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Soft Computing, Intelligent Systems and Modeling (SCISM) Research Group

Focus Areas:

- Multi-Agent Based Healthcare Information Systems (MABHIS)
- Evolutionary Reinforcement Information Retrieval Systems (EvoIRS)
- Natural Language Interaction for Semi-literate Mobile Users (NaISM)
- Computational Intelligence Data Mining techniques for Knowledge Elicitation, Event Prediction and Detection (KEEP)
- UPlanIT: Unified optimization of Planning and scheduling using Intelligent Techniques.

Main Faculty:

- Prof HKO Nyongesa
 - Email: hnyongesa@uwc.ac.za
 - URL: <http://www.cs.uwc.ac.za/index.php/uhp2/viewpage/Henry-Nyongesa/The-homepage-of-Henry-Nyongesa.html>

Contact:

Soft Computing, Intelligent Systems and Modelling (SCISM) Research Group, University of the Western Cape, Robert Sobukwe Road, Bellville, 7535, Republic of South Africa	Phone: +27 21 959 2911 URL: http://www.uwc.ac.za/Faculties/NS/Computer_Science/Pages/Soft-Computing,-Intelligent-Systems-and-Modelling-%28SCISM%29-Research-Group.aspx
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GI Group Fuzzy Systems and Soft Computing

Within the German Society of Computer Science (GI) a research group Fuzzy Systems was founded in October 1993. This group is part of the AI division of the GI.



Focus Areas:

Subjects of the group are the topics Fuzzy Set Theory, Fuzzy Logic, Approximate Reasoning, Fuzzy Control, Uncertainty and Vagueness in Knowledge Based Systems and Fuzzy Data Analysis.

In addition to this, the interest of the group focusses on industrial applications in the field of control engineering (e.g. robotics) as well as speech and pattern recognition. Moreover, neighboring areas like Neural Nets, Machine Learning, and conventional control techniques are considered with respect to fuzzy theory.

Main Faculty:

- Prof. Dr. Rudolf Kruse (speaker)
 - Email: kruse@iik.cs.uni-magdeburg.de
 - URL: <http://fuzzy.cs.uni-magdeburg.de/~kruse>
- Dr. Rainer Palm
 - Email: palm@zfe.siemens.de
- Other:
 - C. von Altrock (INFORM GmbH, Aachen)
 - Prof. Dr. S. Bocklisch (Technical University of Chemnitz)
 - Prof. Dr. Ch. Freksa (University of Hamburg)
 - Dr. J. Heinsohn (Fachhochschule Brandenburg)
 - Prof. Dr. B. Reusch (University of Dortmund)
 - Prof. Dr. H. Zimmermann (RWTH Aachen).

Contact:

Faculty of Computer Science Neural Networks and Fuzzy Systems Universtitaetsplatz 2 D-39106 Magdeburg Germany	Phone: +91 33 2575 2040 Fax: +91 33 2578 8699 E-mail: scc@isical.ac.in URL: http://fuzzy.cs.uni-magdeburg.de/gi124.html
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The European Society for Fuzzy Logic and Technology (EUSFLAT)

EUSFLAT is a new non-profit European Society with the following aims:

- To promote and disseminate the methods, techniques and developments of Fuzzy Logic and technologies
- To encourage the scientific communication and collaboration among its members
- To assemble a group of specialists belonging to different academic fields and professional practices
- To advise associates and companies on subjects regarding Fuzzy Logic and Technologies and other related matters
- To represent the European researchers in Fuzzy Logic and their technologies at the IFSA council
- To establish relations with other national or international associations with similar aims
- To organize, promote and sponsor conferences, workshops and seminars



Working Groups

- Working Group on Aggregation Operators
- Working Group on Fuzzy Control
- Working Group on Genetic Fuzzy Systems
- Working Group on Learning and Data Mining
- Working Group on Mathematical Fuzzy Logic
- Working Group on Philosophical Foundations
- Working Group on Soft Computing in Database Management and Information Retrieval
- Working Group on Soft Computing in Image Processing

Main Faculty:

- Gabriella Pasi - Università degli Studi di Milano Bicocca, Italy
 - Email: president@eusflat.org
 - URL: <http://www.eusflat.org/>

Contact:

URL: <http://www.eusflat.org/index.php>

German Research Center for Artificial Intelligence (DFKI)

Since 1988

29 Academy center in 4 cities.

Research and development projects are conducted in fifteen research departments and research groups, eight competence centers

and six living labs. Funding is received from government agencies like the European Union, the Federal Ministry of Education and Research (BMBF), the Federal Ministry of Economics and Technology (BMWi), the German Federal States and the German Research Foundation (DFG) as well as from cooperation with industrial partners. At present, 443 highly qualified researchers and 371 graduate students from more than 60 countries are contributing to 180 DFKI research projects.



Working Groups

- Knowledge Management (Prof. Dr. Prof. h.c. Andreas Dengel)
- Cyber-Physical Systems (Prof. Dr. Rolf Drechsler)
- Multilingual Technologies (Prof. Dr. Josef van Genabith)
- Plan-Based Robot Control (Prof. Dr. Joachim Hertzberg)
- Robotics Innovation Center (Prof. Dr. Frank Kirchner)
- Innovative Retail Laboratory (Prof. Dr. Antonio Krüger)
- Institute for Information Systems (Prof. Dr. Peter Loos)
- Embedded Intelligence (Prof. Dr. Paul Lukowicz)
- Intelligent Analytics for Massive Data (Prof. Dr. Volker Markl)
- Intelligent Networks (Prof. Dr.-Ing. Hans Schotten)
- Agents and Simulated Reality (Prof. Dr. Philipp Slusallek)
- Augmented Vision (Prof. Dr. Didier Stricker)
- Language Technology (Prof. Dr. Hans Uszkoreit)
- Intelligent User Interfaces (Prof. Dr. Dr. h.c. mult. Wolfgang Wahlster)
- Innovative Factory Systems (Prof. Dr.-Ing. Dr. h.c. Detlef Zühlke)

Main Faculty:

- Berlin, Kaiserslautern, Saarbrücken, Bremen, Osnabrück. (Germany)
 - Professors: Wolfgang Wahlster, Andreas Dengel, Rolf Drechsler, Josef van Genabith, Joachim Hertzberg, Frank Kirchner, Antonio Krüger, Peter Loos, Paul Lukowicz, Volker Markl, Hans Schotten, Philipp Slusallek, Didier Stricker, Hans Uszkoreit, Detlef Zühlke.

Contact:

<p>The German Research Center for Artificial Intelligence is located in Kaiserslautern, Saarbruecken and Bremen and has a Project Office in Berlin.</p>	<p>URL: http://www.dfki.de/web</p>
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Software Competence Center of Hagenberg (SCCH)

Since 1999



Working Groups

- RSE - Rigorous Methods in Software Engineering
- PQE-Process and Quality Engineering
- SAE-Software Analytics and Evolution
- KVS-Knowledge-Based Vision Systems
- DAS-Data Analysis Systems

Main Faculty:

- Johannes Kepler University, Hagenberg, Austria
 - URL: <http://www.scch.at/en/>
 - Prof. Biró Miklós,
 - Prof. Buchgeher Georg,
 - Prof. Chasparis Georgios C.,
 - Prof. Chouikhi Ayadi.

Some of Current Projects:

PQE

- requirements engineering and management
- software design and software architecture management
- software testing and test management
- quality assurance and quality management
- process development and process management
- application and product life-cycle management
- reuse and sustainable development paradigms
- engineering strategies, innovation and technology management

DAS

Data management and analysis: e.g., cost efficiency for storage, transfer and searches with respect to time and storage space;

Process analysis: e.g., identification of statistical correlations;

Process optimization and control: e.g., virtual sensors for the chemical industry, energy efficient controls based on model-predictive approaches

Contact:

Software Competence Center Hagenberg GmbH Softwarepark 21 , 4232 Hagenberg , Austria phone: +43 7236 3343 800 fax: +43 7236 3343 888	URL: http://www.scch.at/en/ email: office@scch.at
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The Artificial Intelligence Research Institute (IIIA)

Since 1985

IIIA researchers in these fields have chaired the leading conferences in Artificial Intelligence (IJCAI, ECAI, AAMAS, EUMAS); and are members of the board of the main journals (associate editorship of the prestigious AI Journal, JAAMAS, JAIR, etc.)



and organizations (IJCAI Board of Trustees, IFAAMAS Board, etc.). The IIIA has produced and produces significant scientific publications (more than 1600 papers since 1985) many of them have been, and are, highly cited.

Working Groups

- Reasoning and Logic
 - Approximate Reasoning and Soft computing / Automated Reasoning
 - Constraint Satisfaction / Expert Systems
 - Incremental design of formal specification
- Learning Systems
 - Autonomous Robots / Case-Based Reasoning / Data Privacy
 - Integration of Problem Solving and Learning /Machine Learning for Music
 - Probabilistic Graphical Models / Machine Learning for Healthcare
- Multi-agent Systems
 - Agreement Technologies - Negotiation
 - Agreement Technologies - Semantic Alignment
 - Agreement Technologies - Trust and Reputation
 - Electronic Institutions / Optimization / Self-* Systems

Main Faculty:

- Spanish National Research Council (CSIC), Universitat Autònoma de Barcelona (UAB), Barcelona, Spain
 - URL: <http://www.iiia.csic.es/>
 - Professors: Josep Lluís Arcos, Eva Armengol, Jesús Cerquides, Gonzalo Escalada-Imaz, Pere García.

Contact:

IIIA-CSIC Campus de la UAB, E-08193 Bellaterra, Catalonia (Spain) Tel: (+34) 93 580 9570 – Fax: (+34) 93 580 9661	URL: http://www.iiia.csic.es/
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Machine Intelligence Research Institute (MIRI)

Focus Areas:



MIRI focuses on AI approaches that can be made transparent (e.g., precisely specified decision algorithms, not genetic algorithms), so that humans can understand why the AIs behave as they do. For safety purposes, a mathematical equation defining general intelligence is more desirable than an impressive but poorly-understood code kludge. Following this approach, the realistic world-models open problems ask how artificial agents should perform scientific inference. We are particularly interested in formally specifying world-modeling that allows the agent's physical state and the programmer's desired outcomes to be located in the model.

Main Faculty:

- Luke Muehlhauser
 - Email: luke@intelligence.org
 - URL: <http://lukemuehlhauser.com/>

Link to join MIRI:

- <https://intelligence.org/careers/>

Contact:

Machine Intelligence Research Institute 2030 Addison Street #300 Berkeley, CA 94704	URL: https://intelligence.org/
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European Neural Network Society (ENNS)

The **European Neural Network Society** (ENNS) is an association of scientists, engineers, students, and others.



Focus Areas:

- Learn about and advance our understanding of the modeling of behavioral and brain processes and to apply neural modeling concepts to problems relevant in many different domains
- Neural Networks is the official journal of the ENNS
- Cooperation with INNS (International Neural Network Society) and JNNS (Japanese Neural Network Society)
- ENNS organizes international conferences every year (ICANN International Conference on Artificial Neural Networks)

Honorary Members:

- Erkki Oja (Helsinki, Finland), Past President (2000-2002, 2003-2005)
- Wlodek Duch (Torun, Poland), Past President (2006-2008, 2009, 2011)

Official members:

- President: Alessandro Villa (Lausanne, Switzerland), Past President 2012-14
- Treasurer: Barbara Hammer (Bielefeld, Germany)
- Secretary: Caroline Kleinheny

Contact:

URL: <http://e-nns.org/>

The North American Fuzzy Information Processing Society

As the premier fuzzy society in North America established in 1981, our purpose is to help guide and encourage the development of fuzzy sets and related technologies for the benefit of mankind. In this role, we understand the importance of, and the need for, developing a strong intellectual basis and encouraging new and innovative applications. In addition, we acknowledge our leadership role to foster interaction and technology transfer to other national and international organizations to bring the benefits of this technology to North America and the world.



Objectives:

- Provide forums for the discussion and dissemination of quality research results and applications.
- Contribute to the definition and development of intelligent systems.
- Integrate diverse disciplines to solve real world problems.
- Facilitate Technology Transfer.
- Foster professional relationships with relevant national or international organizations.
- Promote international collaboration within the North American Fuzzy Community.
- Collaborate on Standard Activities

Main Faculty:

- William Melek
 - Email: president@nafips.org
 - URL: <https://uwaterloo.ca/mechanical-mechatronics-engineering/people-profiles/william-w-melek>

Contact:

URL: <http://nafips.ece.ualberta.ca/>

Center for Soft Computing Research: A National Facility

IRHPA (Intensification of Research in High Priority Areas) is a complementary program to the SERC program of DST, Government of India with activities consisting of setting up of units/core Groups around an eminent scientist and Major National Facilities to nucleate research activities in these areas. The scheme has contributed to augment general R&D capabilities at academic institutions and national laboratories.

Under the said IRPHA scheme the Center has been set up at the Indian Statistical Institute (ISI), Kolkata because of its outstanding contribution and achievements in the area of soft computing and machine intelligence. The center is aimed at conducting research both theoretical and applied, of international standard, in the fields of soft computing. The Center was formally inaugurated by Prof. M. G. K. Menon on 25 October, 2005.

Established at: Indian Statistical Institute Kolkata

Funded by: Department of Science and Technology Government of India New Delhi

The Center has been declared an "Associate Institution" of ISI in 2010.

Faculty:

Prof. Sankar Kumar Pal Distinguished Scientist Phone: +91-33-2575-2040 E-mail: sankar@isical.ac.in	Prof. Ashish Ghosh In-Charge Phone: +91-33-2575-2040 E-mail: ash@isical.ac.in
Dr. Kuntal Ghosh Assistant Professor Phone: +91-33-2575-2044 E-mail: kuntal@isical.ac.in	Dr. Shubhra Sankar Ray Assistant Professor Phone: +91-33-2575-2047 E-mail: shubhra@isical.ac.in

Contact:

Center for Soft Computing Research Indian Statistical Institute 203 B. T. Road Kolkata 700 108 INDIA.	Phone: +91 33 2575 2040 Fax: +91 33 2578 8699 E-mail: scc@isical.ac.in URL: http://www.isical.ac.in/~scc
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IEEE SMCS Technical Committee on Soft Computing

Their goal is to provide a forum for exchanging ideas among Soft Computing researchers and engineers through scientific events, such as organizing special sessions at SMC annual conferences, organizing and supporting international conferences and workshops, our Google Site and Google Group, and editing special issues for SMC Society's publications.



Main Faculty:

- Ajith Abraham - Machine Intelligence Research Labs (MIR Labs), USA
 - Email: ajith.abraham@ieee.org
 - URL: <http://www.softcomputing.net/>
- Mario Koppen - Kyushu Institute of Technology, Japan
- Hideyuki Takagi - Kyushu University, Japan

Contact:

URL: <http://www.ieeesmc.org/technical-activities/cybernetics/soft-computing>

The International Fuzzy Systems Association.

The International Fuzzy Systems Association (IFSA) is a worldwide organization dedicated to the support, development and promotion of the fundamental issues of fuzzy theory related to (a) sets, (b) logics, (c) relations, (d) natural languages, (e) concept formation, (f) linguistic modeling, (g) vagueness, (h) information granularity, etc. and their applications to (1) systems modeling, (2) system analysis, (3) diagnosis, (4) prediction and (5) control in decision support systems in management and administration of human organizations as well as electro-mechanical systems in manufacturing and process industries. IFSA organizes and encourages participation in open discussion session on the future directions and restructuring of fuzzy theory in IFSA congresses. Furthermore, IFSA publishes the International Journal of Fuzzy Sets and Systems and sponsors workshops and conferences on fuzzy theory.

Contact:

URL: <http://isdlab.ie.ntnu.edu.tw/ntust/ifsa/>

Institute for Advanced Management Systems Research (IAMSAR)

IAMSAR/Åbo Akademi University is a research institute with the objective to study and develop the theory and applications of intelligent and knowledge based systems in management. The research is carried out in cooperation with major Finnish companies, normally as several-year research contracts, which makes the research relevant and verifiable as to both the theoretical foundations and the usefulness of the systems technology developed.

Focus Areas:

The research focus of IAMSAR (as defined in its strategic plan for 2010-15) is on supporting people in expanding the limits of the possible in the structures of everyday life, which is guiding both fundamental and applied research and the development and use of soft computing and intelligent systems technologies. IAMSAR builds on a research tradition in management science and information systems research.

IAMSAR has organized its research projects into three research units, which all contribute to the IAMSAR research core:

- Approximate reasoning, knowledge mobilisation, multi-agent systems [Advanced Systems Research]
- Soft computing, multiple criteria decision making, real options valuation [Soft Computing Research]
- Mobile technology applications, mobile value services, mobile business models [Mobile Systems Research]

Main Faculty:

- Professors Christer Carlsson
- others:
 - Professor Pirkko Walden
 - professor Robert Fullér [FIDIPRO] from Etövös Lorand University in Budapest
 - professor Harry Bouwman from TU Delft
 - professor Mario Fedrizzi from University of Trento.

Contact:

Institute for Advance Management Systems Research Joukahaisenkatu 3-5 A 20520 Turku FINLAND	Phone: +358-2-2154096 URL: http://iamsr.abo.fi/
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Institute for Research and Applications of Fuzzy Modeling (IRAFM)

Since 2011.

Focus Areas:

- Theoretical foundations
- Mathematical fuzzy logic in narrow sense (FLn)
 - Fuzzy logic in broader sense (FLb)
 - Fuzzy approximation
 - Development of special methods and tools
 - Control of various kinds of processes on the basis of known linguistically specified control strategy.
 - Managerial decision-making.
 - Classification on the basis of qualitative and quantitative information.
 - Mining linguistically characterized associations from large numerical data bases.
 - Robust solution of differential equations.
 - Analysis and forecasting of time series
 - Signal filtering.
 - Data compression and fusion of pictures.
 - Development of new evolutionary algorithms for global optimization in fuzzy models.



Main Faculty:

- University of Ostrava, Ostrava, Czech Republic
 - Web: <http://www.osu.cz/>
- Professors: Vilém Novák, Martin Štěpnička, Irina Perfiljeva, Antonín Dvořák, Radko Mesiar, Jiří Močkoř,

Contact:

30. dubna 22 701 03 Ostrava 1 Czech Republic Fax: +420 596 120 478	URL: http://irafm.osu.cz/
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Institute for Applied Computer Science (IAI)

Focus Areas:

Machine learning, Mechatronics and Biomechanics, Modeling, Simulation and Optimization, Safe Systems, Virtual Reality and Visualization, Web based Information, Systems and Databases, Artificial Sensors, Simulation and method of measurement, Scientific Information System for Atmospheric Research, Research Group Distributed Computing, Simulation and Visualization, Process-oriented information systems and work structures, Automation for Micro- and Nano Systems, Energy Systems Analysis, High-Throughput Screening, Sustainable Development, Geothermy, bioliq.

Main Faculty:

- Karlsruhe Institute of Technologies, Leopoldshafen, Germany
 - Web: <http://www.kit.edu/english/index.php>
- Prof. Veit Hagenmeyer,
- Prof. Georg Bretthauer,
- Prof. Ralf Mikut.

Some of Current Projects:

- Renewable Energies (EE)
 - Geothermal Energy / bioliq
- Efficient Energy Conversion and Use (REUN)
 - Simulation and Measurement
 - KIC InnoEnergy - CCG_P12 SolComBio (Third party project)
 - Intelligent Sensor Systems for Online Gas Analysis and Source Localization (BMBF-Project)
- Technology, Innovation & Society and Energy Systems Analysis (TIG)
 - Energy Systems Analysis / Sustainable Development
- Atmosphere and Climate (ATMO)
 - Information Systems for Remote Sensing
- SuperComputing (SuCo)
 - Research Group Distributed Computing / Simulation and Visualization
- Science and Technology of Nanosystems (STN)
 - Prozessoriented information systems and work structures
 - Automation for Micro- and Nano Systems
 - Accommodation / DaNa (BMBF-Project) / EUMINAFab (EU-Project) /
- BioInterfaces (BIF)
 - High-Throughput Screening

Contact:

Karlsruhe Institute of Technology Kaiserstraße 12, 76131 Karlsruhe, Germany Phone: +49 721 608-0 Fax: +49 721 608-4290	URL: http://www.iai.kit.edu/www-extern/index.php?id=4&L=1 E-mail: info@kit.edu
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Institute of Applied Informatics and Formal Description Methods (AIFB)

Since 1976

Working Groups

- [business information and communication systems](#)
- [efficient algorithms and organic computing](#)
- [knowledge management and the semantic web](#)
- [complexity management](#)
- [services computing](#)



Main Faculty:

- Karlsruhe Institute of Technologies, Karlsruhe, Germany
 - Web: <http://www.kit.edu/english/index.php>
- Prof. Andreas Oberweis,
- Prof. Hartmut Schreck,
- Prof. Detlef Seese,
- Prof. Wolffried Stucky,
- Prof. Rudi Studer

Some of Current Projects:

- Business Information Systems
- BCC/ PMDMC, e-Certification, IFS, KIT-Horus, LFA, PaaSword
- Efficient Algorithms
- CIVIS, KIT Focus COMMputation, EIT ICT Labs, Helmholtz-Energie-Allianz: Energienetz, HEGRID, Helmholtz Storage and Cross-Linked Infrastructures, Helmholtz Supercomputing and Big Data, IILSE, IMPaCT, KASTEL, KIC InnoEnergy, LSDMA, SES Summer School
- Complexity Management
- CoaSt, ISF
- Knowledge Management
- Semantic MediaWiki
- Semweb4j: RDF2Go and RDFReactor

Contact:

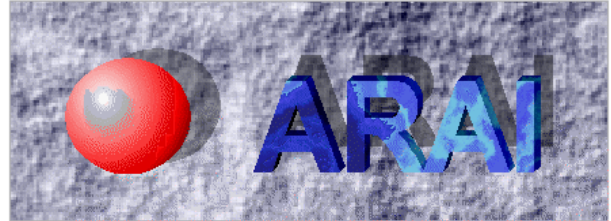
Institute AIFB - Building 11.40 KIT-Campus Süd D-76128 Karlsruhe	URL: http://www.aifb.kit.edu/web/AIFB/en
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Approximate Reasoning and Artificial Intelligence Group (ARAI)

Since 1977

Focus Areas:

- Environmental Impact Assessment using Fuzzy Techniques (fuzzy EIA)
- Economy scheduling
- Intelligent System for Biodiversity Management
- Biocomputing
- Data Bases and Artificial Intelligence
- Neural Networks, Neural Computing and Applications
- Knowledge Extration and Fuzzy Rule-Based Systems
- Evolutionary Computing and Bioinspired Algorithms



Main Faculty:

- Granada University, Granada, Spain
 - <http://www.ugr.es/en/>

Some of Current Projects:

Neural Networks, Neural Computing and Applications

Fuzzy EIA

Data Bases and Artificial Intelligence

Contact:

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SCIP (Soft Computing in Image Processing) Working Group

"The SCIP Working Group is a way to establish and intensify international cooperation between researchers in the area of Soft Computing in Image Processing"



Contact:

URL: <http://www.fuzzy.ugent.be/SCIP/index.html>

Description of Attachments

- 1- The PDF file of this report.
- 2- An Excel file related to this report that shows another view in column dataset format and allows searching and finding your keyword easily.

References

- ✓ <http://www.cs.berkeley.edu/~zadeh/>
- ✓ <http://sciip.um.ac.ir/index.php/aboutsciip/scope>
- ✓ <http://www.softcomputing.es/metaspaces/portal/3/108>
- ✓ <http://www.cs.upc.edu/~websoco/index.php>
- ✓ <http://sci2s.ugr.es/presentation/index.php>
- ✓ <http://www.ntu.edu.sg/home/elpwang/softcomp.html>
- ✓ http://www.uwc.ac.za/Faculties/NS/Computer_Science/Pages/Soft-Computing,-Intelligent-Systems-and-Modelling-%28SCISM%29-Research-Group.aspx
- ✓ <http://fuzzy.cs.uni-magdeburg.de/gi124.html>
- ✓ <http://iamsr.abo.fi/i/>
- ✓ <http://www.eusflat.org/index.php>
- ✓ <https://intelligence.org/>
- ✓ <http://e-nns.org/>
- ✓ <http://nafips.ece.ualberta.ca/>
- ✓ <http://www.isical.ac.in/~scc>
- ✓ <http://www.ieeesmc.org/technical-activities/cybernetics/soft-computing>
- ✓ <http://isdlab.ie.ntnu.edu.tw/ntust/ifsa/>
- ✓ <http://www.fuzzy.ugent.be/SCIP/index.html>
- ✓ <http://irafm.osu.cz/>
- ✓ <http://www.aifb.kit.edu/web/AIFB/en>
- ✓ <http://www.iai.kit.edu/www-extern/index.php?id=4&L=1>
- ✓ <http://www.scch.at/en/>
- ✓ http://arai.ugr.es/grupo/index.php?option=com_frontpage&Itemid=1
- ✓ <http://www.iiia.csic.es/>
- ✓ <http://www.dfki.de/web>
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